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ABSTRACT

This document reviews what the literature has to say about predicting the future of education, about the role of human values in affecting that future, and about the role of educational technology in the future. A review of current trends in Ontario is also presented. The literature reviewed suggests that teachers can control the future to a greater extent than they do now; that tools such as the Delphi Technique are available to help develop descriptions of alternative futures in terms of values, needs, and conditions; and that, to date, an extremely small portion of the educational dollar has been spent on long-term planning.
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THE FUTURE: SOME THOUGHTS FROM THE LITERATURE

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What is meant by the future

> "When men perceive that uncertainty lies ahead, their concern with the future increases proportionately. Therefore it is inevitable that more of the future be taken into account, but it is only through thoughtful study of forecasts and forecast tools that it can be taken into account reasonably."
> (WEAVER, P.D.K., Jan. 1971, p. 271).

In the past few years, a new science has emerged, called Futurology, the science of forecasting the future. Governments and corporations have hired social scientists and planners and established "think tanks" to plan for the future. Early in the development of this new science it was evident that the social and political forecasts of the futurists seemed to be only a linear extrapolation of the existing trends. In other words, the forecasts tended to view the future in terms that were presently unthreatening. This working definition of the future, however, was too narrow; the future was viewed as something that was going to happen and over which we had little influence. The early futurists did not foresee any significant discontinuities let alone initiate them. Slowly it was recognized that there is a basic contradiction between the notion of anticipating or predicting the future and the idea of assuming a stance to influence the molding of the future. Futurism is a way of thinking; it concentrates not on forecasting the future, but on developing alternative futures and considering the policies and programs likely to be necessary in them.

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How do we go about developing alternative futures? There are three major steps involved in the process of predicting:

1) developing descriptions of the future

2) relating these predictions to actions by evaluating the consequences of alternative courses of action

3) evaluating the desirability of predicted aspects of alternative futures.

One technique often used in long-range planning or forecasting is the Delphi Technique. This is a methodology for organizing and sharing "expert" forecasts about the future, without allowing persons of high position to force judgments in certain directions. A panel of experts is asked to make forecasts on an individual basis, without face-to-face confrontation. The results of this survey are returned to the same panel members giving them the opportunity to revise their forecasts or to give their reasons for remaining outside the central tendencies. This procedure is repeated until there is a convergence of opinions. Although the Delphi was originally intended as a forecasting tool in education, it has also become an important planning tool to probe priorities held by the various members of organisations. The Delphi Technique has become an effective tool for enhancing the capacity of educators to think about the future in complex ways and so helps educators to make better decisions, i.e. decisions which account for alternative consequences.

It is becoming evident that the future is the product of man-made change. Man has always to some extent "created" the future. What he did in the past, whether wittingly or inadvertently, determined the present. If the present leaves much to be desired, it is because the adults who created the present were not cognizant of the Impact of their "present" decisions on their "future".

Unfortunately, much of our future has already been decided if current trends continue. I use the word "our" not just as a member of the teaching profession in Ontario, but in a more global sense. Up to the 1600's, the world population was doubling about every thousand years. However by 1850 it had doubled again and by 1950, it had more than doubled again. This drastic acceleration of population growth will dramatically shape future events in our lifetime. The nature of our society is such that environmental pollution is increasing and natural resources are dwindling at terrifying rates. Recent crises in world food production as well as capital investments are consequences of these trends. For example, although the widespread famine in Bangladesh and India was predicted seven years ago, little action was taken to avert this crisis.

In North America, where a minority of the world's population uses a majority of the world's resources, more and more writers are noting the widening gap between demands and needs. Since there is mutual interaction between a society and its educational system, let us now return our focus to education.

The challenge facing educators is to decide what must be done differently to enhance the probability of securing desirable futures. Improving the educational enterprise to meet future needs and demands involves not only modifying what already exists but also creating. It is critical that educators become more aware of their role in controlling future events in response to the changing society.

> " Every youth between the ages of fifteen and eighteen years is entitled to an education in accordance with his needs and capacities and consistent with the needs of the society in which he lives". (Robert Warren, "A Blue Print for Secondary Education". In The Canadian Secondary School: An appraisal and a forecast).

In our dynamic and rapidly changing society the school must prepare the students for new ways of living together both as individuals and as members of society, for new ways of thinking, and new ways of feeling. The need for education is increasing in order to keep people sufficiently equipped to cope with the continuing change. Perhaps never before in history has the distinction between individual interest and community interest been harder to maintain. Ideas such as "self reliance" and the "self-made man", which had prominence in the nineteenth century, have clearly become outdated given the contemporary dependence of all people on each other.

In order to meet the demands of the future, the curriculum must become more flexible and varied. The educational system of the future should be able to accomplish the capability of utilizing new technological developments for educational purposes, the provision of a wide variety of realistic learning experiences for the learner, and the involvement of the learner in making decisions about his educational program so that ultimately the learner controls his own learning. In addition, the educational system must emphasize human relations, provide the means by which individuals can determine overriding purposes in their lives and help each individual, regardless of characteristics and previous conditions, to release the potential he possesses. Beginning very early, students need experiences that help them to understand the nature of change and to recognize that the future is at least partly malleable.

Values

Human values are central to our concern, if what will happen in the future is controlled to some extent by what we feel should happen. Teaching human values is teaching survival skills. If humanity is to survive for the next century, then there must be a shift from the massive competitive value structure which puts man against man in competition over

limited resources. It seems equally obvious that the human values which moral philosophers and religious leaders have generally agreed upon through the years - values such as love, cooperation, trust, acceptance, dignity, respect for individual differences, truth, understanding - are the values we should be teaching. If the school has a place in the world of tomorrow; if the classroom has a function for the future, it is to teach our young these human values, these survival skills.

Let there be no mistake about what this means for the classrooms. There can be no preaching. Skill at tennis is learned by playing tennis; skill at interdependence is learned by working interdependently, and skill at love is learned through loving. It is the teacher's role to foster human values by creating learning opportunities where these values will come into play.

If we agree with Dewey, Piaget and Kohlberg that development of moral judgement is a cognitive, a knowing process, rather than the absorption of an imposed set of standards, then rather than lecture and preach to our students about the importance of honesty, responsibility, cooperation, it is clearly the job of teachers to set up learning experiences which will facilitate moral development.

Technology

In contrast to the writers concerned with value education in the future, there are those whose focus is on the application of technology.

The Research and Policy Subcommittee of the Committee for Economic Development in the U.S. has stated that, "If schools are to make real progress in instruction, most of them must be jolted from their complacency by vigorous thrusts that will break through the old patterns and support experiment and innovation."

McLuhan has also supported this view when he says we are still looking through "the

rear-view mirror and taking definitions, goals and assumptions about education from the factory world in which, for which and in the image of which public schools were created." He has maintained that media are the harbingers of revolutionary ways of relating, perceiving and being in the world. For the past decade, McLuhan as well as many others have been prophesying that the teacher of the future will be the director of complex computer-based systems, that the curriculum of the future will differ in terms of packaging, procedures and location. Instead of books, students will carry kits of video tapes, film loops, voice tapes, simulation exercise machines and other products of technology. Although the teacher's fear that he will be replaced by technology is probably groundless, in the long run, teachers may welcome the use of technology in education if it will free them from much of the routine of drill activity. Educational technology has demonstrated that it can do routine jobs and some teaching tasks as well as or better than a teacher. Computers can carry out drill and repetitive jobs easily and frequently more effectively than a teacher. The computer is already being used in a number of school systems to relieve the teacher of tasks incidental to teaching such as testing, grading papers, taking inventory and keeping attendance. And the administration has benefitted in terms of scheduling and record keeping.

Despite the forecasts and the availability of many technological resources, we seem no closer now however, to the predicted technological takeover than we were ten years ago.

In fact few teachers seem to use the media currently available for instructional purposes. A survey of Metropolitan Toronto and Area School Boards in 1972 found that none of the media investigated, i.e. television, video tape, film-strips, motion pictures and tape recorders was used as an integral component of the instructional process. Eighty percent of the secondary teachers and 60% of elementary teachers reported that they never use television! Although video tapes are one of the latest additions of communication to education, the reporter felt that it would not be widely used because of its cost and the fact that a technician is required.

Current Trends

There are several identifiable trends in present secondary schooling in Ontario which reflect our current attempts to influence the future and which therefore have implications for the classroom teacher's role. For example:

1. Schools are beginning to help students sort out conflicting value systems by recognizing the legitimate variation in values.
2. More students are learning

   how to learn

   how to think

   how to make decisions
3. There is greater utilization of local resources with members of the community coming into the school as well as students going out into the community.
4. More students are receiving individualized instruction in a more informal atmosphere with a corresponding reduction in formal schooling with its compulsory courses, standards, etc.
5. Attempts are being made to increase cooperation and reduce competition among students as well as among teachers, their federations and the boards.
6. Politicians are continuing to impose ceilings on educational funds telling us that 9% of the G.N.P. goes to educational costs, neglecting of course to point out that the average family in Ontario spends three times as much on alcohol and cigarettes as they do on financing education through taxes.
7. As cited in the above section, there is an increased use of the computer and other technology.
8. There is increasing decentralization of administrative decision-making from the Ministry and the board offices to the local schools or families of schools.

While in many instances individual teachers have been involved in initiating some of the above trends, the profession as a whole and their Federations have the public image of being responders, and in some instances reactors to change, rather than initiators of change.

In concluding this paper, the literature reviewed would suggest that teachers can control the future to a greater extent than they do now. Tools are available, such as the Delphi technique, to help us develop descriptions of possible alternative futures in terms of values, needs and conditions. Our knowledge and understanding of ways of influencing the future is increasing and a discipline of futurism, although young, does exist. To date, however, an extremely small portion of the educational dollar has been spent on long-term planning. In the hope that the current OSSTF study on the role of the Secondary School is a move in this direction, I would recommend that OSSTF appoint an educational planning officer with the prime responsibility of planning alternative futures.

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